

IN THE CLAIMS

Please cancel Claims 12-15, 17-20 and 22, without prejudice to or disclaimer of the subject matter contained therein.

Please amend Claims 1, 9-11, 16 and 21 as follows.

1. (Currently Amended) An image processing apparatus for outputting a page image corresponding to print data inputted from an ~~outside~~ external source, comprising:

analyzing means for analyzing said print data at the time of outputting a first copy and generating a page image;

image spooling means for holding said page image at the time of outputting the first copy;

page image reading means for reading out said spooled page image at the time of outputting second and subsequent copies;

mechanical sorting means for performing mechanical sorting and paper ejection every copy;

discriminating means for discriminating whether said mechanical sorting means can be used or not and discriminating the maximum number of sorting page images which can be processed at once by said mechanical sorting means; and

switching means for, when a plural copy print is designated, discriminating whether to execute the plural copy print by using said image spooling means and said page image reading means, or to execute the plural copy print without using said image spooling means and said page image reading means, ~~are used or not~~ in accordance with a discrimination result of said discriminating means and the designated number of copies.

2. (Original) An apparatus according to claim 1, wherein in the case where it is determined by said discriminating means that said mechanical sorting means cannot be used or in the case where a print of the number of copies larger than the maximum number of sorting page images which can be processed at once by said mechanical sorting means is designated, said switching means allows the plural copy print to be executed by using said image spooling means and said page image reading means.

3. (Original) An apparatus according to claim 2, wherein when a paper ejection mode is not a continuous sort, even if the print of the number of copies which is equal to or smaller than the maximum number of sorting page images which can be processed at once by said mechanical sorting means is designated, said switching means uses said image spooling means and said page image reading means.

4. (Original) An apparatus according to claim 1, further comprising:
print data spooling means for holding said print data as much as at least one job;
and
print data reading means for reading out said print data stored in said print data spooling means a predetermined number of times,
and wherein when said image spooling means and said page image reading means are not used, said plural copy print is performed by using said print data reading means.

5. (Original) An apparatus according to claim 4, wherein in the case where said mechanical sorting means can be used, said print data reading means reads out the print data each

time the page images of the maximum number of sorting page images which can be processed at once by said mechanical sorting means are outputted.

6. (Original) An apparatus according to claim 1, wherein said image spooling means holds the page images compressed in a predetermined format.

7. (Original) An apparatus according to claim 1, wherein said page image is a set of image data obtained by dividing one page into a plurality of band-like images or image data as much as one page.

8. (Original) An apparatus according to claim 1, wherein said page image reading means outputs the page image compressed by a predetermined format while decompressing it.

9. (Currently Amended) An image processing method of outputting a page image corresponding to print data inputted from an ~~outside~~ external source, comprising:

an analyzing step of analyzing said print data at the time of outputting a first copy and generating a page image;

an image spool step of holding said page image at the time of outputting the first copy;

a page image reading step of reading out said spooled page image at the time of outputting second and subsequent copies;

a discriminating step of discriminating the maximum number of sorting page images which can be processed at once by mechanical sorting means for performing a mechanical sort paper ejection every copy; and

a determining step of determining whether to execute a plural copy print using said page image reading step, or to execute the plural copy print without using said page image reading step, ~~is executed or not~~ in accordance with a discrimination result in said discriminating step and the designated number of print copies.

10. (Currently Amended) A program storage medium which stores a program for executing an image processing method of outputting a page image corresponding to print data inputted from an ~~outside~~ external source, wherein said program comprises:

a code for executing an analyzing step of analyzing said print data at the time of outputting a first copy and generating a page image;

a code for executing an image spool step of holding said page image at the time of outputting the first copy;

a code for executing a page image reading step of reading out said spooled page image at the time of outputting second and subsequent copies;

a code for executing a discriminating step of discriminating the maximum number of sorting page images which can be processed at once by mechanical sorting means for performing a mechanical sort paper ejection every copy; and

a code for executing a determining step of determining whether to execute a plural copy print using said page image reading step, or to execute the plural copy print without using

said page image reading step, is executed or not in accordance with a discrimination result in said discriminating step and the designated number of print copies.

11. (Currently Amended) An image processing apparatus connected to an information processing apparatus and an image forming apparatus, comprising:

receiving means for receiving print data from said information processing apparatus;

generating means for generating page image data on the basis of the print data received by said receiving means;

holding means for holding the page image data generated by said generating means in into an image memory;

obtaining means for obtaining information indicative of the number of paper ejection bins capable of being used by a paper ejection ability of said image forming apparatus;

output means for outputting the page image data generated by said generating means to said image forming apparatus; and

control means for, when a plurality of copies of said page image data are outputted to said image forming apparatus by said output means, selecting a first output mode when the number of copies of the print data to be outputted is larger than the number of the paper ejection bins capable of being used by said image forming apparatus, and selecting a second output mode when the number of copies of the print data to be outputted is equal to or smaller than the number of the paper ejection bins capable of being used by said image forming apparatus ~~either a first output mode or a second output mode on the basis of copy No.~~

~~information of the print data to be outputted and the information obtained by said obtaining means,~~

wherein in said first output mode, a process is executed for outputting all pages of a first copy of the print data to a first paper ejection bin of said image forming apparatus and holding the generated page image data by said holding means ~~is executed~~ and, thereafter, said held page image data is read out and second and subsequent copies of the print data are outputted to said first paper ejection bin or a paper ejection bin other than said first paper ejection bin, and

in said second output mode, a process is executed for sorting the page image data generated by said generating means for every page in accordance with a plurality of paper ejection bins possessed by said image forming apparatus, and outputting said page image data ~~is executed~~ the same number of times ~~as many~~ as the number of pages to be outputted.

Claims 12-15 (Cancelled).

16. (Currently Amended) An image processing method of outputting print data received from an information processing apparatus to an image forming apparatus, comprising:

a generating step of generating page image data on the basis of the print data received from said information processing apparatus;

a holding step of holding the page image data generated by said generating step in ~~into~~ an image memory;

an obtaining step of obtaining information indicative of the number of paper ejection bins capable of being used by a paper ejection ability of said image forming apparatus;

an outputting step of outputting the page image data generated by said generating step to said image forming apparatus; and

a control step of, when a plurality of copies of said page image data are outputted to said image forming apparatus by said outputting step, selecting a first output mode when the number of copies of the print data to be outputted is larger than the number of the paper ejection bins capable of being used by the image forming apparatus, and selecting a second output mode when the number of copies of the print data to be outputted is equal to or smaller than the number of the paper ejection bins capable of being used by the image forming apparatus ~~either a first output mode or a second output mode on the basis of copy No. information of the print data to be outputted and the information obtained by said obtaining step,~~

wherein in said first output mode, a process is executed for outputting all pages of a first copy of the print data to a first paper ejection bin of said image forming apparatus and holding the generated page image data by said holding step ~~is executed~~ and, thereafter, said held page image data is read out and second and subsequent copies of the print data are outputted to said first paper ejection bin or a paper ejection bin other than said first paper ejection bin, and

in said second output mode, a process is executed for sorting the page image data generated by said generating step for every page in accordance with a plurality of paper ejection bins possessed by said image forming apparatus, and outputting said page image data ~~is executed~~ the same number of times ~~as many~~ as the number of pages to be outputted.

Claims 17-20 (Cancelled).

21. (Currently Amended) A program storage medium that stores a computer program for an image processing method of outputting print data received from a processing apparatus to an image forming apparatus, the computer program comprising:

code for executing a generating step of generating page image data on the basis of the print data received from said information processing apparatus;

code for executing a holding step of holding the page image data generated by said generating step ~~in~~ into an image memory;

code for executing an obtaining step of obtaining information indicative of the number of paper ejection bins capable of being used by a paper ejection ability of said image forming apparatus;

code for executing an outputting step of outputting the page image data generated by said generating step to said image forming apparatus; and

code for executing a control step of, when a plurality of copies of said page image data are outputted to said image forming apparatus by said outputting step, selecting a first output mode when the number of copies of the print data to be outputted is larger than the number of the paper ejection bins capable of being used by the image forming apparatus, and selecting a second output mode when the number of copies of the print data to be outputted is equal to or smaller than the number of the paper ejection bins capable of being used by the image forming apparatus
~~either a first output mode or a second output mode on the basis of copy No. information of the print data to be outputted and the information obtained by said obtaining step,~~

wherein in said first output mode, a process is executed for outputting all pages of a first copy of the print data to a first paper ejection bin of said image forming apparatus and holding the generated page image data by said holding step ~~is executed~~ and, thereafter, said held

page image data is read out and second and subsequent copies of the print data are outputted to said first paper ejection bin or a paper ejection bin other than said first paper ejection bin, and

in said second output mode, a process is executed for sorting the page image data generated by said generating step for every page in accordance with a plurality of paper ejection bins possessed by said image forming apparatus, and outputting said page image data ~~is executed~~ the same number of times ~~as many~~ as the number of pages to be outputted.

22. (Cancelled).